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Day 01

Fire and Ice

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2016

## 1.0.A Daily Outline

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Purpose:

Initiate Ethic of the course

Initiate Processes of the course

- Break ice personally
- Make sure syllabus and expectations understood
- Set ethos of group work and collaboration
- Do something real pertinent to the topic right away; pique curiosity
- Model question generation
- Initiate model of exploring resources (group notes, posting), then apply resources to some application and product
- Initiate use of BB to post results
- Initiate reading of something right away as homework from Phil Trans
- Identify number of people who can bring computers regularly

Physical

Arrange tables, set up video materials, mic on

Set up activity

Board

Welcome to Fire and Ice

Sign in

Find place with your name

Make a stick-on name tag with first name as well

Take a syllabus and look it over

Anyone not already registered, see me now

Address video and consent

Materials

Syllabus

Name tags

Premade name cards

Poster paper

Poster markers

White board markers

Assignment: Handout provided at class and on BB Listed below were my initial ideas

Download PhETs – BB linked; held for after class 2 to worry about

BB survey: about you

What are you good at?

How did you get that way?

What are you looking forward to in this class?

What concerns might you have about this class?

On-line surveys: links

CSCI, ASCI, TOLT?

Decided to do the first two, plus thermo assessment but not TOLT

Read: Materials from and concerning 17<sup>th</sup> Century understandings ; these could be looked at before first class as a teaser

Any readings, bring some notes: never needs to be more than one page. Can be bullet points.

10 Introductions and Icebreakers

15

Self intro – who I am

Interns: Ben Stewart, Tiffany Hatstat, Sara Edquist, Patrick Kessler

Staff: Julia Chan, Michael Tridenti

Ice-breaker walkabout – same as in PLTL (7 min) Find someone who ....

Quick show of hands: how many found someone who....

Next, explore class concept, expectations, video documentation work, raise questions.

10 Syllabus Exploration

30

Someone at table hold up the blue folder – you are the group manager

Find in the folder a set of instructions called “Introduction to the ‘Fire & Ice’ Course”

Carry out the instructions. You have 10 minutes complete the task.

To save time, instead of having them report out on “what in common”, I just went up to each table and asked individuals what was found to be unique. This gave me a chance to talk with each person a bit.

[Groups execute activity that develops roles, explores syllabus, and invites questions.]

Address syllabus questions.

Talk about video documentation.

Remind them of the purpose.

The class itself will run. No script. No second takes.

Capturing what happens, how, why. To the extent possible, ignore the cameras. Don't play to the cameras – this is not your big break.

All on camera and on audio all the time. It is possible that someone will do or say something stupid or embarrassing. Although everything will be captured, not everything will appear in public product. Trust that in editing, we catch and eliminate unimportant, but human, behaviors. You may want to think about your clothing. Err on side of conservative and remember camera angles. Catholic and uniforms. I don't want to lose valuable footage because showing it would embarrass one of you.

15 **Heat perception activity** separate student handout and instructor script  
20

3 cups: room T, iced, hot water pre-prepared 6 tables x 3 mugs = 18

Collect their work

Starts Question Bank – report out from groups, write on poster paper (poster paper is portable) -- put up several pieces. Keep it with class, and people can add to it each day.

I should take from Spokesperson, and loop around the tables. That's more lively as people reveal their questions.

Talk about the importance of asking questions. That's what "to inquire" means.

The essence of science is asking questions.

But the better the question, the more insightful the outcome.

So, science is not just about answering questions.

It's about finding questions, important questions, to ask.

**HAD TO STOP HERE, TIME TOO SHORT FOR NEXT ACTIVITY**

**This actually gave me time to restructure the activity based on the Question Bank**

40 Exploring resources about sensation of heat

Jigsaw organizational structure

4 table of 4 perfect balance 5 tables of 4 become 4 groups of 5.

Each table will be given a set of materials to read. Only your table has the materials. Identify important facts and relationships. Each person needs to understand. 10 min read, 10 min talk Produce a group report – will be posted on BB with the material – take with you to new group. [This is group accountability.]

Once you develop your expertise, you will be prompted to move to a new group (color of your name tag), where you will address a new question. Each person in the new group will have some unique expertise and information to contribute. [Jigsaw is indiv accountability]

Materials: (in file box) Topics in hand:

[each grabbed from web or texts; given a letter label; scan and post on BB]

Group 1: A: neuron firing adaptation patterns

B: action potential basics

Group 2: C: action potential (different source)

D: neuron structure and types

Group 3: E: thermoreceptors

	F:	senses and neurons
	G:	senses and neuron structure
	K:	Thermoreceptors WP -- details
Group 4:	H:	regulation, hot/cold sensors
	I:	thermoreceptors and hypothalamus
	J:	hot/cold neurons

Task for new group: Create a visual poster that combines your experience with sensing temperature and the information you just read about. You have 20 min to create the poster and get it up on wall.

Monitor time – this activity can go over to next day, but I don't want it to extend and take up a lot of time. Primarily, this is to give everyone a sense of process.

If time, each group should identify a Spokesperson to walk us through the poster (1 minute). Should we judge which poster does the most effective job? Do a closed eyes poll. [ask for an evaluation, but lower peer pressure and evaluation risk]

Overnight:

Reading about and from Robert Boyle, 17<sup>th</sup> Century

## Intern guide Day One

Jan 19 email

Hi,

I've gotten behind on my initial contacts with you all. I know that Julia has had a chance to do an initial interview.

Fire and Ice starts tomorrow Tuesday at 3:40 in Parsons S150. We have at least 16 students registered and we may get as high as 20-24. I have a working plan for you, which Julia may have described, but I will say more later.

For the initial classes, your role is to be that of an observer and to keep a set of notes. There are several things to observe: me, students, interactions, setting, materials. There will be a table for you in the classroom, and you can camp there. You don't need to come early, but after class (and every class for at least a while), we want all four of you to go up to the graduate student lounge on the second floor. Julia will turn on a video camera and you will have up to 15 minutes to "debrief" each other about that day's class, sharing your observations or questions. Neither Julia nor I will be there while you are talking. I may give you a prompt to seed your conversation.

By the end of the week, I'll be able to give you a more extended outline of what I'll ask you to do for the semester.

I have some things to investigate regarding how to release the promised compensation to you. I will be putting you on the Blackboard site for the course tomorrow, so you can see what the students have access to.

I'm looking forward to working with you on this project.

Chris Bauer